

REPORT OF THE MEETING

HELD FOR THE

PRESENTATION

TO

PROFESSOR BONNEY,

D.Sc., LL.D., F.R.S., F.G.S., F.S.A.,

Of his Portrait, ==

NTED BY FORMER PUPILS.

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[As many subscribers were unavoidably prevented from attending the meeting, it was felt that they would be glad to have some record of the proceedings, and that also it would be of interest to others. Unfortunately, no verbatim report of most of the speeches could be obtained, but the account here given reproduces the main points—much of it in the exact words. It has been thought best to give the report fully where it was possible, although the proportions thus are not always maintained.]

THE portrait of Professor Bonney, which has been painted at the request of former Geological students in the University of Cambridge, and in University College, London, was presented to him, on their behalf, by Professor Sollas, D.Sc., LL.D., F.R.S., F.G.S., who came from Dublin for the purpose. The painting is by Mr. Trevor Haddon (Slade Scholar and Medallist and Fellow of the Herkomer School), a three-quarter length figure, and represents the Professor seated in his Doctor of Science robes.

The ceremony for the Presentation took place on Monday, December 16th, 1895, at University College, in the Botanical Theatre, which had been kindly lent by the Council for the occasion. Many of the old students had had the pleasure of arranging flowers, especially in front of the portrait, as it stood on the platform with palms beside it. The theatre was well filled. In addition to those taking part in the ceremony and a large number of the subscribers and former students, there were present many friends and distinguished guests. Among these were Sir J. Eric Erichsen, President of University College, Dr. Henry

Woodward, President of the Geological Society, and Mrs. Woodward, Dr. and Mrs. Blanford, Dr. Collie, Professor Carey Foster, Professor Foxwell, Dr. Gregory, Dr. H. Hicks, Professor Hill, Dr. G. J. Hinde, Mr. Hudleston, Professor Judd, Professor Ker, Lieut.-General MacMahon, Rev. J. Marshall, Professor Ramsay, Rev. Dr. Robbins, Professor T. Roger Smith, Professor and Mrs. Weldon. Many unfortunately were obliged to leave as soon as the meeting closed, and the list of those who were present is thus incomplete.

Not a few telegrams of congratulations and letters had been received from those who were unable to be present.

The Chairman, Mr. J. J. H. Teall, F.R.S., took his place at the table on the floor of the theatre, having on his right Professor Bonney and the President of University College, and on his left Professor Sollas.

Mr. Teall said :—

I have been selected as Chairman, because I happen to be Professor Bonney's senior pupil. Twenty-six years ago it was my good fortune to enter St. John's College, Cambridge, on Professor Bonney's side. I had no definite object in going to Cambridge beyond that of taking my degree, but, in consequence of the interest in Geology, which Professor Bonney's lectures aroused, I soon found myself working for the Natural Science Tripos. During my residence at Cambridge I was indebted to Professor Bonney not only for advice in connection with the ordinary affairs of life, but also for almost the whole of my Geological education. It is therefore with the greatest pleasure that I find myself in a prominent position on the present occasion. The proposal that his old students should present Professor Bonney with his portrait as a mark of their gratitude, esteem, and affection, originated with Mr. Marr, who also has been largely instrumental in carrying out his own suggestion. I will therefore first call on Mr. Marr to give an account of the cordial manner in which the proposal has been taken up by Cambridge men.

Mr. Marr said :—

Although, as the Chairman has stated, I may have been actually the first to suggest the gift of the portrait, yet I feel I cannot claim

much merit from the fact; for if I had not suggested it, someone else would certainly have done so. The idea, so to speak, was in the air. As to the part which I have taken in the active work, I was about to call it a labour of love, but that expression would be untrue, for there was no labour in it. As soon as the letters were written, the answers came in quickly and readily, and the project was received with enthusiasm by the old Cambridge pupils. There were also others not strictly pupils who claimed the coveted honour of being considered such, on account of informal instruction received in the study or the field. Some old pupils whose names do not appear on the list would also have desired to be there, but there were difficulties in obtaining names and addresses of all, as no record of attendance at Dr. Bonney's Cambridge lectures was available to be consulted. It would take too long to read all the letters received from former Cambridge students, and rather than read extracts I will give a general idea of what was in their minds when they wrote. They all looked upon Dr. Bonney as in every way a "guide, philosopher and friend;" as one who, though he was just before he was generous, yet allowed generosity to walk so closely on the heels of justice, that they seemed to go side by side. A sentence from one letter I feel bound to read, as the writer, Dr. R. D. Roberts, specially sent a message to Dr. Bonney. He wrote—"I was one of his (Dr. Bonney's) very early pupils, but my sense of indebtedness to him for the many kindnesses of those days is not weakened by the twenty-three or twenty-four years that have passed since then."

Here my remarks might be brought to a close, but I propose to trespass on Professor Sollas' ground, as what I am about to say, he could not. On Professor Bonney's shoulders fell practically the whole of the Geological teaching at Cambridge after the death of Professor Sedgwick. That he completely discharged the difficult duty which thus came to him is abundantly shown by the fact that amongst his very early pupils were two men like Mr. Teall and Professor Sollas.

I thank Professor Bonney for all that he did for me personally, and I feel that I may speak for all the pupils equally with myself when I state that any successes which may come to us will give us

double pleasure from the knowledge that they will also please our revered teacher and master.

The Chairman next called upon Miss C. A. Raisin to speak on behalf of all the former students of University College who had joined the movement.

Miss Raisin said :—

I wish that someone who could better fulfil this duty might have undertaken it, but as I have had the great pleasure and the great privilege of writing to my fellow-students, it seemed right that I should do my best to give you some account of the answers which were sent by the University College members. To do this, I have to repeat what you have already heard from the Cambridge representative. The proposal was received with strongest approval and warmest sympathy. The letters were full of expressions that it had the “heartiest wishes” of the writer, that it was a “most excellent project,” that the writer would be “most unhappy to be left out of any scheme for doing honour to” our Professor. Again and again, students write to express their feeling that this will be “a very slight acknowledgment of the many pleasant hours spent in the laboratory and on the excursions,” that they “often look back to those pleasant times.” Frequently, they suggest some of the reasons for the pleasure which they received—that the Professor was “so especially kind and generous in giving extra help.” “His courtesy and kindness to his classes must have led many to wish that they could show their gratitude and affection in some tangible way.” “I am sure that any token from his pupils would be an inadequate return for all his kindness—the great interest always shown in his students deserves some tangible mark of appreciation on their part . . . no one in England in similar position merits an expression of goodwill from his students more.” “One can never repay the kindness and help received ; but this may serve as a token of our appreciation of the help, and of his readiness to give such help, and of the thorough enjoyment of the work done.” The words speak not only of the pleasure but of the profit. One writes, “I feel to have known him to have been a great privilege. I think one leaves with a great deal more than Geology.” Others, of the “assistance and advice, both while attending the classes and

since." All these expressions are used spontaneously, in letters written in answer to the first announcement, which was so worded that no reply was necessary.

One of our members who has done good work in mapping among the difficult rocks of Scotland, and is now entering upon what is perhaps a similarly difficult task—Mr. Greenly—wishes me to express how much he regrets that he cannot come up to London for this meeting. He writes of how "Professor Bonney has been kind to me (as to others) and has done much to stimulate interest in Geology." "He has been uniformly kind to me, and particularly so in connection with my present undertaking, having helped me with slides and sympathy and in every way."

Perhaps I may be allowed to add one further expression of gratitude somewhat fitting in this place, in my old College, which always has been so ready to open its classes to women when there was a real demand. Among the students of University College for whom I have the honour to speak, women students are included, and we may add our special thanks for the benefit which the work in this class has brought to us. It has given to us, as to all, greater interest in Natural Science; there has been always available help in difficulties, continual suggestion of further work, equal facilities for all earnest students.

Speaking as I do on behalf of all the students of University College who have joined in this presentation, I may then say that it represents a real and united feeling. No movement could have been more completely harmonious and cordial throughout. It expresses a feeling which will form a link of union between those who have been fellow-students; many to our regret cannot be with us to-day, but they have sent their sympathy, some even from distant lands—from India, from the wilds of Australia, from America. We students of University College rejoice also that in this movement we have been joined with those who are senior students, including so many distinguished geologists, some of whom have come at the expense of time and trouble and by long journeys to do honour to the occasion—our fellow-students (if here we may so claim to be), although separated in time and place. It is of this real feeling among us, that the portrait, which will soon be shown, is a token.

It is a token also of another memento of our gratitude for the teaching and help received. This we hope will, this we know must lead to further work—in all of us to continued study of Nature in which our interest has been aroused or increased ; in some who are carrying on research in other sciences to the use there of the principles which they have learned in this ; while some of us may have the high privilege of continuing our work in Geology and following in that the method which always has been put before us, to search Nature herself for facts and draw our inferences from them. By such work in all directions we acknowledge and spread the influence which we are here met to celebrate, and of this recognition, less tangible but not less real than the portrait before us, it shall be, we trust, a memorial and a promise.

The Chairman then asked Mr. Crowley, as one of the recent students of University College, to say a few words.

Mr. Crowley said :—

It gives me very much pleasure to testify on this occasion to the great enjoyment and profit that has been gained by Professor Bonney's students in the lectures and on the excursions. It is very true that what we have learned from him embraces far more than Geology. If I may be allowed for a moment to point this by personal experience, I would like to say that in my own profession, the medical profession, I have again and again found the application of the principles we have been taught. The true methods of scientific research illustrated in the rocks have been of use in every branch of my medical studies. I am sure that Professor Bonney's students, whatever the direction of their work, will never forget the debt which they owe to him.

Professor Sollas was then called upon to make the presentation.

Professor Sollas said :—

I need scarcely say how highly I value the privilege of being permitted to share in expressing the feelings of this assembly. The task would be far easier had we merely to thank Professor Bonney for imparted knowledge, but our debt to him is much greater than that. His influence has penetrated deeper into our mental being, moulding our habits of thought and guiding character in its growth.

It is comparatively easy—dangerously easy I would say—to

render oneself liked, to earn the half-contemptuously endearing title—"a good fellow;" and if a man should give his mind to it, it might not prove hard, say by a course of consistent sternness, to make himself feared; but what is difficult, and consequently an attainment very rare, is so to enlist the sympathies of pupils as to awaken an affection tempered with respect—a respect softened with affection. To those who do this for us no tribute of gratitude can be too great; they satisfy a desire deeply implanted in our being, of having someone to whom we can look up, whose blame we fear, whose approval is labour's best reward.

Mr. Teall has said that Professor Bonney made of him a geologist; and as I reflect on this it seems to me that scarcely any living teacher has made so many geologists as Professor Bonney: at Cambridge he used to manufacture on an average about one a year; sometimes, indeed, it was more, for I remember Jukes-Browne went out in the same year that I did: and as some of us have taken to producing geologists ourselves, the rate of increase of Professor Bonney's students and their descendants becomes a problem like the old question of the peopling of the world by Adam and Eve. It is not surprising then to find Professor Bonney's students in all quarters of the habitable—and not everywhere habitable—globe. As I left Dublin I encountered one—La Touche—who had just returned from unravelling the difficult structure of Scinde. Professor Bonney's students are not only to be found in different regions of this terrestrial sphere, but in various provinces of thought: some who walked with him for a while in Geology, studying the wholesome rocks, have deviated into Zoology, and devote themselves to the lower animals and the ways, not always wholesome, of mankind; but these still remember, perhaps sadly, their days of grace, and are proud to recall that they too were once students of Professor Bonney's. I cite as an example Professor Haddon, and would add as an instance of a strayed botanist, Professor Hartog, were he not a man too various to be so epitomised: he too left Cambridge in the same year with me, and that perhaps is the reason he did not become a geologist, for it would be beyond nature to make three geologists in one year.

And while talking of the making of geologists, it is fitting to

mention that in the case of some of us Professor Bonney had to commence by unmaking; he had not only to implant truth, but to cast out error; for in the early days of my recollection Geology was troubled with many monsters, "jabberwocks, snarks and other boojums," who had cast an unholy influence over us. There was for one the gneiss and granite monster—it was thought that great gneissose regions were produced by a gentle simmering of primitive mud, and that if overdone this was liable to pass into genuine granite; so culinary were the operations of Nature represented to be that it was sometimes difficult to look upon a piece of granite without perceiving a faint flavour of onions. Great were the battles with this monster, now happily overthrown, bearing many marks of Professor Bonney's weapons. Another was excavation by glaciers, or as one of my friends calls them, "glaziers," thus innocently expressing a once prevalent idea that these agents have a kind of resemblance to intelligent mechanics, who armed with sharp points and a knife can cut through the hardest substances or fill up a hole with plastic material. The lakes of Switzerland, North America and tropical Africa showed what they could accomplish, when put to it. I think this, too, is an extinct "jabberwock."

While thus touching on the destructive powers of our old and revered teacher, let me add that he has not only taught us the arts of peace, but has trained us in the exercise of arms, showing us by his example how both to discover new truths and to manfully defend all that seems true to us. We may not hope to emulate him in sword play, but we may at least imitate him in keeping a steadfast face to the foe.

Professor Bonney's work, however, has been much more constructive than destructive; he has been a maker of geology as well as of geologists. He has shown us the foundation stones of the earth's crust, and is now helping us to unravel the mysteries of the tangled glacial deposits; he has given us a new insight into the meaning of the British Trias, and since his first lectures on petrology, which Mr. Teall and I attended some twenty-three years ago, has been constantly adding to our knowledge of igneous rocks. It is strange to reflect on how little was known in England of this subject, when Professor Bonney first commenced his lectures. It

is hard to believe, and yet it is a fact, that when Professor Bonney read his paper on the origin of serpentine, geologists took this rock to be some kind of animal remains, and his paper, as I am told, was referred to a palæontologist, before the Geological Society could venture to print it in their Journal.

There is one pleasure, I must confess, that Professor Bonney's male students have not enjoyed, that of co-operating with him in some of his work : that is an honour which has been reserved for woman, who—as I think it is Browning says—can “always better man's best.” In our case—the so-called stronger sex—it has always been labour rather for us than with us, and I have often wondered, as we must all have done, how amidst so many occupations Professor Bonney could find time to answer questions. Yet pigeon-holed among my correspondence are letters of his enough to fill a volume.

And now unwillingly I must conclude, leaving my story half untold, for the kindest thoughts may never be expressed, so that I cannot refrain from envy of the artist, who, untrammelled, is able by his art to depict in life-like manner our teacher as he appears to us ; but the wise counsellor, the steadfast mentor, and the kind friend—who can portray us these ?

To Professor Bonney :—

Sir, on behalf of your former pupils and students in Cambridge and University College, London, whose names are engrossed in this address, I beg your acceptance of this portrait of yourself.

Professor Bonney said :—

My good friends and old pupils : There are times when it is difficult to find words to express what we feel. That is my position now—I cannot adequately thank you for this touching mark of your affection or my friends who have spoken for the kindness of their words. But in dwelling so much on the lights, they have forgotten the shadows. There is much colour in that picture, I fear there was still more in their eulogies. I am, for my part, too conscious of the imperfections of all my work, both as a teacher and as a worker in Geology. But for the one and for the other I have some excuse to plead—it has never been my good fortune to be able to devote myself wholly to science. Always there have been other duties which have had claims upon me—not the least being that of

earning a sufficient income—for science has been to me comparatively unremunerative. Once, in 1885, when an endowment fell in for my chair here and I resigned my post at the British Association, I did hope that I could devote myself mainly to science: but the agricultural depression had begun, and in two or three years I found myself, as now, obliged to keep on working for an income. That, however, is not all—my teaching has always been defective, partly from my own imperfections, partly from want of fitting appliances. At Cambridge everything had to be extemporized. In the early days of modern Geology this did not matter much. Now it is a most serious impediment. I believe I occupy a unique position—that I am the only Professor of Geology in the United Kingdom who has no qualified assistant, no funds whatever allotted to him for the necessary expenses of instruction and of practical work. That this state of things exists is not my fault. Standing where I do, I can say no more than ask you to remember, when my career in this college ends in failure, as now seems to me almost certain, that I am not alone to blame. I have been set to make bricks without straw.

But let me turn to my work apart from teaching, to which you have referred in over eulogistic terms. It may interest some of you to know how I was attracted to those subjects in which such reputation as I possess has been made. In a desultory way I had worked at Geology from my school-days, but in 1869 I began, as an experiment, lectures on Geology at St. John's College, Cambridge. I had not gone far before I found that the part of the subject which we now call petrology, was in hopeless confusion. I had to tell my students something, and so I tried to teach myself. In order to ascertain facts I began to work tentatively at the microscopic structure of rocks—a study then quite in its infancy. But my earlier papers were on Physical Geology and especially on the action of ice. My method in preparing these was to go and see for myself. At first I had intended to study only the petrology of the igneous rocks, and I made a journey at least once every year to examine into their field relations and to collect specimens for microscopic examination. But I had got interested in Charnwood Forest on one side and in the Lizard on the other, and the horizon widened. My first paper

containing microscopic results was published in 1877, a study of the lherzolite of the Pyrenees, which had been undertaken to complete the history of the serpentine of the Lizard. I will not weary you with a list of papers, but merely say that presently I was forced into the study of the metamorphic rocks and began that systematically about 1881. I had already done something in Anglesea and something in Scotland and had found that light must be sought in other regions to explain the perplexities of these. So I began with the Alps and ever since then I have been trying to decipher the history of the crystalline schists and gneisses in this chain and in other lands. Each journey has had a definite purpose, has been usually an attempt to solve a special problem. Perhaps I have been chasing an *ignis fatuus*—that, time must show. I am sometimes inclined to regret that I ever took up the question, for it has converted my holiday resort into a place of labour, and has been a fruitful source of controversies. But it is no use regretting. What I have always sought to do is to gather facts and to submit them to inductive reasoning. Early in my career, I found that I must not trust the statements even of men of note, unless I knew well their personal equation. I would that I had discovered this earlier ; most of my mistakes have come from putting faith in those who passed for princes of Geology.

So now, addressing many of you for the last time, I say : Go and see things for yourselves. Do not put too much trust in what you read, unless you know the author. Books have their value, but that of travel is greater still. Gather facts and reason inductively on them. Do not run after the first captivating notion. Distrust brilliancy in an hypothesis almost as much as you would brilliancy in a complexion when seen in Regent Street.

Another piece of advice. Although I have inked a good deal of paper in my time, I would say do not be too hasty in writing. Distrust sonorous phrases which only cloak inaccuracy of thought. Plod on in the hard, solid and dull line of fact-collecting and inductive reasoning, and prefer doing a little work that will last to a great deal that will break like a catherine-wheel into sudden splendour and then vanish into darkness. I am not sure that in the present age this is the easiest way to success. It is pretty sure to

land you in controversies, because you will often have to sweep aside popular mistakes, and show that golden idols have feet of clay. I have had my share of controversy. I have hit hard and straight, but I hope always above the belt. I am not ashamed to have done it, for I believe that inaccurate observations and unsound inductions are a curse, not a boon to science. They cumber the ground ; and error, like all bad things, manifests an astonishing vitality. Truth, it seems to me, is a sacred thing, whether in science, in politics, or in religion, worth fighting for, worth self-denial, worth suffering for, if need be.

But I will weary you no longer. It remains only to thank you all, those especially who have been active in organising this presentation from the beginning to this day. I have been a secretary myself and know how much time and trouble such work costs. But I thank you all for this unexpected token of your affection. It was exceptionally welcome, for it came at a time when I had lost heart in my work, and I was sad from other causes. This portrait will be a perpetual remembrance of to-day and of the proudest hour of my life. It will encourage me to do my best for the time that remains. This cannot be long. I have begun within the last year or two to feel "*non sum qualis eram.*" In a very few years indeed I must cease from teaching ; in a very few more, if not even then, from all scientific work. But though the shadows are lengthening, it cheers me to think that those who come after me will see that I was not wholly a failure, and so long as memory lasts I shall never forget your kindness, never the affection which you have shown me to-day.

Mr. Watts said :—

I regard it as a great privilege to be allowed to propose a vote of very hearty thanks to the artist to whom we owe the making of this portrait, and in whom I am glad to recognize the brother of my old friend Professor Haddon. That the portrait is a success all here will be able to testify, with the picture and the model before them. But it is by no means always that a portrait of a scientific man is successful, and on the walls of the Royal Academy we are all familiar with the misshapen microscopes, the rotund retorts, the skulls and stuffed bird-skins, which are made to do duty as the totems of scientific men. Mr. Haddon has boldly and, as I venture

to think, very wisely brushed aside all such symbolism and been content to give us a picture of the man himself, and to catch that expression which those who know him well treasure up as that under which we like to remember Professor Bonney. But this cannot have been an easy task, for as one of his most distinguished students said to me—"The extraordinary feature of Professor Bonney is his versatility. At one moment your teacher, at another a simple enquirer, again a cordial friend, and then, and perhaps quite suddenly, your college tutor, and all the while a right down good fellow." Mr. Trevor Haddon has clearly seen and hinted at all these expressions, but he has kept the last one most conspicuously to the front. I would even go further. Those who have heard Professor Bonney chastise his opponents, some of whom are proud to say they have been his old students, will recognize in his portrait a reserve of strength which bids those who would enter into controversy with him to make their ground very sure before they denounce his theories or dispute his facts.

We thank the painter most cordially for handing down to posterity so worthy a presentment of the tutor we feared, the master we reverence, and the friend we love and respect.

Dr. S. Rideal said :—

Although I have to plead guilty to having wandered out of the straight path of Geology into a chemical bye-way, I am pleased to be present here to-day, and to testify to my appreciation of the work which Professor Bonney has done at University College and elsewhere. It is now some ten years ago that I first became acquainted with the work of Mr. Haddon, who was then good enough to make some diagrams of the geyser cones in the Yellowstone Park for me, so that I have since associated Mr. Haddon with Geology. I am now pleased to find Mr. Haddon's skill as an artist devoted to the painting of Professor Bonney, whom we all value as our teacher and friend.

Mr. Trevor Haddon said :—

I must return my most grateful thanks for the cordial reception you have given to my humble efforts. We artists usually prefer to keep in the background on these occasions. Referring to backgrounds reminds me of what Mr. Watts has just said about the

portraits of scientific men in the Academy and elsewhere. I at first thought everyone concerned would prefer a background containing a handsome case of specimens, but on referring the matter to Professor Bonney, he very promptly swept away the idea of such a thing. On this occasion, at any rate, his sympathy did not accompany specimens. Allow me to add that it has given me great pleasure to be associated in this work, and to thank all concerned for their kindness to me.

The Rev. E. Hill said :—

Many are truly pupils of Professor Bonney who never listened to a lecture from him, nor profited by his tutorial care. Among such, I may count myself. The action of the authorities in lending this theatre to a company so largely attended from outside the college seems to me in harmony with this. I beg leave to propose a vote of thanks to them.

Mr. Strahan said :—

It gives me great pleasure to be present at this meeting. The attendance shows that no ordinary room would have sufficed for a gathering of all those who wished to acknowledge their gratitude to Professor Bonney. I myself have a vivid recollection of the little lecture room in the second court at St. John's, where I learned so much and met with so much kindness. I have much pleasure in seconding the vote of thanks to the Council of University College.

The vote of thanks was then put to the meeting and carried unanimously.

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